

REMARKS

Applicant respectfully requests reconsideration and allowance of claims 36, 38-42, 68, 71 and 72 that are pending in the above-identified patent application. Applicant has amended claims 68 and 72 herein. New claim 73 is added. Support for these amendments can be found in paragraph [0027] and Figs. 4, 5, and 6 of US 20060025767, which is a publication of the subject application. No new matter is added by the amendments herein. In view of the following discussion, Applicant submits that all pending claims are in condition for allowance.

I. Rejection of Claims 36, 38-42, 68, 71 and 72 Under 35 U.S.C. §112:

At page 2 of the subject Office Action, the Examiner has rejected claims 36, 38-42, 68, 71 and 72 under 35 U.S.C. §112 first paragraph. In view of the amendments herein canceling the term 'resilient', Applicant respectfully submits that the Examiner's rejection has been overcome.

II. Rejection of Claims 68, 71 and 36 under 35 U.S.C. §103(a):

At page 2 of the subject Office Action, claims 68, 71 and 36 are rejected under 35 U.S.C. §103(a) over Sherman et al. (US 5,879,350) in view of Bono et al. (US 6,755,829). In view of the aforementioned amendments, applicant submits that this rejection is overcome.

The claimed subject matter generally relates to orthopedic implantable devices, and particularly to pedicle screw and rod system and associated method of joining two or more bone segments. Amended independent claim 68 recites, in part, a cap associated with each cup, each cap being generally cylindrical and having at least two shoulders that extend radially outward a center of the cap, each shoulder comprises a downwardly extending end configured to engage an outer surface of a respective cup.

Sherman et al. and Bono et al., alone or in combination, do not disclose or suggest such aspects.

Sherman et al. relates to a bone screw assembly for engagement in vertebrae of the spine. The multi-axial bone screw assembly 10 includes a bone screw 11 configured to engage a bone, such as a vertebra. The assembly further includes a receiver member 12 for supporting the bone screw, a

contracting collet 13 for engagement with the bone screw, and a compression member or set screw 14 that is disposed within the receiver member 12 to clamp an elongated member or spinal rod R within the assembly 10. However, as conceded on page 4 of the subject Office Action, Sherman et al. does not disclose the closure mechanism with a cap as recited in independent claim 68.

Bono et al. relates to an assembly such as an anchor screw, bone plate, offset hook, post, transverse connector or other spinal anchor for anchoring to bone and clamping a linkage such as a rod, wire cable or the like. In particular, Bono et al. discloses that the assembly has a top member with an open slot to receive the linkage, and a twist-lock closure cap to close the open end, capturing the linkage in the slot. (*See*, Bono et al. Abstract). However, Bono et al. does not make up for the aforementioned deficiencies of Sherman et al. with respect to independent claim 68 as it does not teach or suggest a cap as recited in the amended claim 68. On page 4 of the subject Office Action, the Examiner contends that Bono et al. discloses a closure mechanism with at least two inverted shoulders wherein each inverted shoulder has a contact surface inclined in a direction radially outwardly from a center axis of the cup at Figs. 6A – 6C. However, claim 68 is now amended to recite that each shoulder comprises a downwardly extending end that is configured for engaging an outer surface of a cup. None of the embodiments for a closure cap disclosed by Bono et al. teach or suggest such aspects as recited in claim 68.

In accordance with the claimed subject matter the cap comprises downwardly-extending ends (58, 60) that engage the outside surface of the cup (20) to prevent radially outward deflection or deformation of the cup (20) as the locking screw (40) is advanced against the rod (30) causing the cap (38) to be biased upwardly against the tapered inner surface (48) of the cup (20). This design allows loose retention of the components relative to the rod so a surgeon can easily make adjustments. It also enables superior performance without the need for costly high tolerancing. (*See*, applicant's Fig. 6 and paragraph [0027], [0028] of US 20060025767)

In view of the above, it can be concluded that Sherman et al. and Bono et al. fail to disclose all aspects of amended independent claim 68 of the instant application, this claim is, therefore, patentable. As claims 36 and 71 depend from amended independent claim 68, and as each such claim recites additional patentable features, the subject dependent claims are, therefore, likewise patentable. Therefore, Applicant respectfully requests that this rejection be withdrawn.

III. Rejection of Claims 36, 38-42, 68 and 71-72 under 35 U.S.C. §103(a):

At page 5 of the subject Office Action, claims 36, 38-42, 68 and 71-72 are rejected under 35 U.S.C. §103(a) over Schlapfer et al. (US 6063090) in view of Bono et al. (US 6,755,829). In view of the aforementioned amendments, applicant submits that this rejection is overcome.

The claimed subject matter generally relates to orthopedic implantable devices, and particularly to pedicle screw and rod system and associated method of joining two or more bone segments. Amended independent claim 68 recites, in part, a cap associated with each cup, each cap being generally cylindrical and having at least two shoulders that extend radially outward a center of the cap, each shoulder comprises a downwardly extending end configured to engage an outer surface of a respective cup.

Schlapfer et al. and Bono et al., alone or in combination, do not disclose or suggest such aspects.

Schlapfer et al. relates to a spinal fixation system that consists of a retainer head 3 with the central axis 4 and upwardly open channel 5 shaped as a yoke and running transversely to the central axis 4 as well as a downwardly open cavity 6 shaped as a truncated cone tapering downwardly with the central axis 4 wherein spring chuck 7 shaped as a hollow truncated cone with alternating slots is provided coaxially removable which is formed to the acceptance of the head 9 of a pedicle screw 2. However, as conceded on page 7 of the subject Office Action, Sherman et al. does not disclose the closure mechanism with a cap as recited in independent claim 68.

Bono et al. relates to an assembly such as an anchor screw, bone plate, offset hook, post, transverse connector or other spinal anchor for anchoring to bone and clamping a linkage such as a rod, wire cable or the like. In particular, Bono et al. discloses that the assembly has a top member with an open slot to receive the linkage, and a twist-lock closure cap to close the open end, capturing the linkage in the slot. (*See*, Bono et al. Abstract). However, as discussed *supra*, Bono et al. does not make up for the aforementioned deficiencies of Schlapfer et al. as it does not teach or suggest a cap as recited in the amended claim 68.

In view of the above, it can be concluded that Schlapfer et al. and Bono et al. fail to disclose all aspects of amended independent claim 68 of the instant application, this claim is, therefore, patentable. As claims 36, 38, 39, 40, 41, 42, 71 and 72 depend from amended independent claim 68,

and as each such claim recites additional patentable features, the subject dependent claims are, therefore, likewise patentable. Therefore, Applicant respectfully requests that the Examiner's §103 rejections be withdrawn.

IV. New claim 73

New claim 73 depends from independent claim 68 and recites additional patentable subject matter. Therefore, claim 73 is patentable over the art of record for at least the same reasons as claim 68.

Conclusion:

In view of the foregoing, Applicant submits that the instant claims are in condition for allowance. Early and favorable action is earnestly solicited. In the event there are any additional fees due and owing (or refundable) in connection with this matter, please charge same to our Deposit Account No. 11-0223.

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Respectfully submitted,

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